

Commonwealth of Kentucky
Division for Air Quality
EXECUTIVE SUMMARY

FINAL

Draft Conditional Major, Construction / Operating

Permit: F-07-030

Kentucky State Capitol Campus Utility Operation

Frankfort, KY 40601

July 18, 2007

Ben Markin, Reviewer

SOURCE ID: 21-073-00085

AGENCY INTEREST: 85158

ACTIVITY: APE20070001

SOURCE DESCRIPTION:

The Division for Air Quality received an initial application from the Department for Facilities and Support Services (Kentucky State Capitol) for an initial state permit on May 3, 2007. However, based on the evaluation of potential to emit calculations, emissions of nitrogen oxide (NO_x) and sulfur dioxide (SO₂) exceeded one hundred tons per year, and that triggers the applicability of 401 KAR 52:020-Title V requirements. Upon discussions with the permittee, it was established that utilization of the back up fuel for all the natural gas boilers might not exceed a third of the year or 229,300 gallons per year. Hence the facility can limit the emissions of NO_x and SO₂ to less than 90 tons per year on any consecutive twelve months total, to preclude the applicability of 401 KAR 52:020 and be permitted as Federally Enforceable/Conditional (401 KAR 52:030) Major source.

Kentucky State Capitol campus utility operation provides utility services to the Commonwealth of Kentucky Capitol Complex, including the Capitol and Capitol Annex. The current utility operation includes two large natural gas boilers (rated at 31.5 and 38.5 MMBtu/hr) each with fuel oil as a backup; two small natural gas boilers rated at 3.17 MMBtu/hr each and one emergency generator rated at 970 KW.

The facility wishes to replace the two large boilers (rated at 31.5 and 38.5 MMBtu/hr) with four smaller natural gas boilers (12.3 MMBtu each). The new natural gas boilers will be purchased with Low-NO_x burners in the spring of 2008. The Kentucky State Capitol Campus utility operation also plans to replace the current emergency generator with two new generators in the fall of 2007. Each of the calculations were done using the diesel emission factors (AP-42) for the worst case scenario.

PUBLIC, EPA, AND AFFECTED STATE REVIEW:

On September June 1, 2007, the public notice on availability of the draft permit and supporting material for comments by persons affected by the plant was published in *The State Journal* in Frankfort, Kentucky. In addition, notification of the issuance of the draft permit was sent to the U.S. EPA on June 1, 2007 via e-mail. No states are affected by this permit action. The public comment period expired 30 days from the date of publication.